Abstract

A method for forming a contact capable of tolerating an O_2 environment up to several hundred degrees Celsius for several hours is disclosed. To slow down the metal oxide front of the metal layer at the metal-polysilicon interface, the metal layer is surrounded by one or more oxygen sink spacers and layers. These oxygen sink spacers and layers are oxidized before the metal layer at the bottom of the plug is oxidized. Accordingly, the conductive connection between the polysilicon and any device built on top of the barrier layer is preserved.